

HEPATITIS C

I. INTRODUCTION

Hepatitis has many causes including chemical and infectious agents. The viral agents are now listed from hepatitis A to hepatitis G.

The hepatitis C virus (HCV) was first identified as a distinct virus in 1988. It is the most prevalent of all the bloodborne viruses. HCV used to be the primary causative agent of post-transfusion hepatitis and remains the most frequent cause of endstage liver disease requiring transplant.

The hepatitis C virus can be transmitted by blood, sexual and perinatal routes. Since 1992, blood and blood products have been screened for HCV, and transfusion associated transmission is now very rare. Currently, intravenous drug use is the most common route of blood borne transmission. Other risk groups for HCV include hemodialysis patients, sexual contacts of infected persons, persons with multiple sex partners, infants born to infected mothers and health care workers.

The incubation period for HCV is eight to nine weeks. About one third of newly infected people are asymptomatic. When present, symptoms include fatigue, jaundice, nausea and vomiting and abdominal pain. Chronic HCV infection develops in 70% - 80% of infected persons, which is often a subclinical disease and can lead to cirrhosis and hepatocellular carcinoma after decades of recurrent attacks on the liver. More than 4 million people in the US are believed to have been infected with HCV.

HCV infection occurs among people of all ages, but the greatest incidence of new infection occurs in those in their twenties and thirties. Alcohol worsens the outcome, possibly by increasing viral replication or by increasing the susceptibility of liver cells to further injury from HCV.

Alpha interferon, with or without Ribavirin, is the treatment most widely used for HCV. Patient adherence is critical to success of treatment of HCV as side effects, especially depression, cause discontinuation in up to 15% of patients.

Current guidelines to reduce the risk of health care workers becoming infected with bloodborne diseases are especially important for the prevention of occupationally transmitted HCV because: it is the most prevalent of bloodborne viruses in the United States; it remains asymptomatic in most infected persons for long periods of time, decreasing the likelihood of clinical recognition; it can be transmitted by needle-stick; and there is no vaccine or postexposure prophylaxis for HCV. The strategy is to treat all clients as though they have blood-borne disease that can be infectious to others. The principles of Standard Precautions serve to protect the client as well.

II. SCREENING

A. The diagnosis of hepatitis C is based on the presence of serum antibody (anti-HCV). Target amplification techniques such as PCR are used to measure HCV

RNA levels (viral load). Currently available tests require clinical interpretation, as they do not distinguish between new infection, chronic infection, severe infection, or resolved infection. Individuals should be evaluated for the severity of liver damage because this virus is known to have irregular pulses of activity and inactivity.

- B. Clients at high risk (male or female) should be offered screening for HCV (Appendix).
- C. For persons with HIV infection, HCV screening with HCV antibody assays should be conducted at least yearly and more frequently depending on specific circumstances (e.g., community HCV prevalence and incidence, high-risk sexual behavior, and concomitant ulcerative STDs and STD-related proctitis).
- D. For all clients (male or female) who were born between 1945 and 1965 and who have not previously had ascertainment of HCV infection status, one-time testing is recommended. (Appendix)

III. MANAGEMENT AND CLIENT EDUCATION/COUNSELING

- A. Clients found to test positive for serum antibody (anti-HCV) should be referred for medical evaluation and possible treatment.
- B. To protect their liver from further harm, HCV-positive individuals should be advised to avoid using alcohol and taking new medication (including over-the-counter and herbal supplements) until they have consulted their physician.
- C. HCV-positive individuals should be vaccinated against hepatitis A and hepatitis B if they are not immune.
- D. To reduce transmission to others, these HCV-positive individuals should be advised not to share any personal items that may have blood on them (e.g., toothbrushes and razors).

IV. HEPATITIS C AND CONTRACEPTIVE MANAGEMENT

- A. Combined hormonal contraception should not be given to clients with active viral hepatitis (MEC category 3/4 for initiation, category 2 for continuation).
- B. Combined hormonal contraception can be considered for clients with chronic HCV or who are carriers (MEC category 1 for initiation or continuation).
- C. HCV is not a contraindication for other forms of contraception.

V. REPORTING

Maryland law requires provider and laboratory reporting of all cases of hepatitis infection. Reporting instructions and forms can be accessed via the Maryland DHMH website: <http://phpa.dhmf.maryland.gov/Pages/what-to-report.aspx>

VI. FOLLOW-UP

- A. Sexual contacts and household members of the client with chronic HBV infection should be tested, and susceptible persons should receive the vaccine series.

REFERENCES

1. CDC. Sexually Transmitted Diseases Treatment Guidelines. 2015. Morbidity and Mortality Weekly Report; June 5, 2015. Vol 64(3).
2. Recommendations for the identification of chronic hepatitis C virus infection among persons born during 1945-1965. MMWR 2012; 61.
3. US Preventative Services Task Force. Screening for hepatitis C virus infection in adults. Rockville, MD: US Department of Health and Human Services, Agency for Healthcare Research and Quality; 2013.

APPENDIX

GUIDELINES FOR HCV SCREENING

In 2004, the USPSTF issued its recommendations on screening for hepatitis C virus (HCV) infection. On the basis of its review of the evidence, the Task Force recommended against routine screening for HCV infection in asymptomatic adults who are not at increased risk (a grade "D" recommendation) and found insufficient evidence to recommend for or against routine screening for HCV infection in high-risk adults (a grade "I" recommendation).

In addition, in 2012 the CDC began recommending one-time testing HCV infection for persons born during 1945-1965 as this population has a disproportionately high prevalence of HCV infection and related disease. This is therefore an additional target population considered at high risk. In 2013 the USPSTF also added this as a recommendation (Grade B).

For persons with HIV infection, HCV screening with HCV antibody assays can be considered at least yearly in those at high risk for infection and more frequently depending on specific circumstances (e.g., community HCV prevalence and incidence, high-risk sexual behavior, and concomitant ulcerative STDs and STD-related proctitis).

High-risk adults include:

- Persons who have injected illegal drugs, including those who injected one or a few times many years ago and do not consider themselves as drug users
- Persons who received tattoos in prison
- Persons with selected medical conditions, including:
 - Persons who received clotting factor concentrates produced before 1987
 - Persons who were ever on chronic (long-term) hemodialysis
 - Persons with persistently abnormal alanine aminotransferase levels
- Prior recipients of transfusions or organ transplants, including:
 - Persons who were notified that they received blood from a donor who later tested positive for HCV infection
 - Persons who received a transfusion of blood or blood components before July 1992
 - Persons who received an organ transplant before July 1992
- Persons born in 1945-1965 (one-time testing recommended for this criteria)

Routine testing for HCV infection should be performed on the following individuals based on a recognized exposure:

- Health care, emergency medical, and public safety workers after needlesticks, sharps, or mucosal exposures to HCV-positive blood
- Children born to HCV-positive women

Persons for whom routine HCV testing is not recommended unless they have risk factors for infection:

- Health care, emergency medical, and public safety workers
- Pregnant women
- Household (nonsexual) contacts of HCV-persons
- The general population

Persons for whom routine HCV testing is of uncertain need:

- Recipients of transplanted tissue (e.g., corneal, musculoskeletal, skin, ova, sperm)
- Intranasal cocaine and other non-injecting illegal drug users
- Persons with a history of tattooing or body piercing
- Persons with a history of multiple sex partners or sexually transmitted diseases
- Long-term steady sex partners of HCV-positive persons

Source: US Preventative Services Task Force. Screening for hepatitis C virus infection in adults. Rockville, MD: US Department of Health and Human Services, Agency for Healthcare Research and Quality; 2013.